recent advances in charcoal-column hemoperfusion.[6] A case of survival in massive theophylline overdose shows the gamut of clinical events that characterize the toxicity of this pharmacologic agent.

A 51-year-old 93-kg (205-pound) woman with a history of asthma and chronic schizophrenia ingested a "bottle of Tedral" (a combination of theophylline, ephedrine hydrochloride and phenobarbital) because of insomnia and presented within hours to the emergency unit because of severe agitation. On examination the patient was noted to be restless, tachypneic and obese, with cool, diaphoretic skin, slurred speech and vertical nystagmus. Pupils were 6 mm and sluggishly reactive. Rectal temperature was 35.5°C (95.9°F), pulse 140 and regular, blood pressure 100/60 mm of mercury, and respirations 24 and somewhat labored. Bilateral wheezing and thick, yellow secretions were present. Attempts to give charcoal orally were resisted. While under observation the patient became hypotensive (blood pressure 60/0 mm of mercury). Cardiac monitoring showed an irregular supraventricular tachycardia; acidosis and hypokalemia were present. After the intravenous administration of fluids and potassium chloride, arterial and central venous pressures returned to normal ranges. Approximately 12 hours after drug ingestion a grand mal seizure occurred, accompanied by pronounced bradycardia and hypotension; serum theophylline level was 148 μg per ml. After two hours of persistent seizure activity, pancuronium bromide (Pavulon) was given. Creatine phosphokinase values reached 29,200 (negative cardiac fraction) and peak serum theophylline level was 152 μg per ml.

The supraventricular tachycardia persisted through the second hospital day, then reverted to sinus tachycardia. Flaccid paralysis gave way to an awake, disoriented state. The patient was extubated on day 5. Oliguria and azotemia supervened; shunt placement and conventional hemodialysis were initiated on day 8. On day 12 she was readmitted to the intensive care unit and intubated because of a severe asthma attack with pulmonary aspiration.

Despite a stormy hospital course, the acute renal failure (felt secondary to the myolosis) resolved and the patient's usual mental state returned. She was discharged on the 45th hospital day weighing 75 kg (165 pounds).

Hypokalemia and elevated anion-gap metabolic acidosis have not been reported with theophylline toxicity and may, in the case described, be attributed to poor nutrition and acute circulatory collapse. Their presence should be sought in cases of suspected toxicity as they would be expected to contribute to the well-described occurrence of seizures and cardiac dysrhythmias.

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Patient Care Audits Not Cost Effective

TO THE EDITOR: Having just completed two years as Chairman of our hospital's Quality of Care Committee producing the required audits, I feel that little was accomplished in the way of improving patient care or in finding areas of needed medical education.

In reviewing the audits required during this time, I note that they did not uncover one single consistent defect in patient care either in methods or in the actions of specific physicians. As a matter of fact, the audits showed that either we provided good care or that our audits asked the wrong questions. The criteria selected must have been "governmentally" correct: the last ten audits reviewed by the San Francisco Peer Review Organization were rated as "very good"—5; "good"—2; "fair"—1, and "poor"—2. One "poor" audit on breast carcinoma received the low rating because of the "failure to take any action for criteria not met." Those criteria were documentation of pelvic and rectal examinations and vaginal smears. Our audit on cholecystectomy was graded as "poor" because "the criteria were not applicable to quality of care." Actually we took the areawide audit provided by the peer review organization in Sonoma County and used it. Evidently different peer review organizations have different viewpoints.

Having spoken with members of this type of committee in other hospitals, I find they share similar feelings.

We estimate the personnel hours spent on an average audit at 34 hours per audit. This is in pronounced contrast to 375 man hours that the University of California, San Francisco, reported it spent on a particular audit. Using our conservative figures and $10 per hour, this comes to $340 per audit. As there are approximately 3 million admissions in the 543 community hospitals in California, this should necessitate some 3,000 audits per year or a $1,200,000 expenditure. Adding on the bureaucratic expense for the gang downtown to shuffle papers, there is well over a $1.5 million expense each year in California alone for an almost nonproductive activity.

Who is to blow the whistle to stop this waste? It should be our colleagues who are officers of the peer review organizations. The San Francisco Peer Review Organization does not have any criteria for cease and desist limits on this program, and I doubt if anyone else does either. Not only are definitions of goals to be achieved in any program desirable, but limits of action need definition also to discontinue a program when it fails or has filled its purpose. But after all, when one is emotionally involved in a program it becomes difficult to speak out although other observers have.[1-3] As for me, I will no longer give my time or be associated with this program.

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Communicating by Touch

TOUCH IS THERAPEUTIC. We talk to patients by the way we touch them. If you touch them roughly, you are telling them that you are not very interested in them, not very thoughtful of them. If you touch them gently, you speak to them and you reassure them. So, you talk with more than words, you talk with the way that you touch during examination. I would evaluate a very high proportion of ophthalmologists and other physicians as being much too rough in their touch, and certainly almost all students are. So please consider how you touch a patient.

—WILLIAM H. HAVENER, MD, *Columbus, Ohio*

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